

cells are more raised above the crust and tubular than those of the latter species. Here and there among the open-mouthed cell-tubes, there occurs a tube which, instead of being open, is closed above with a little cap, from one side of the centre of which rises an umbonal-like process which is perforated at the apex (Pl. XI. fig. 6). Probably these organs are connected with the reproduction of *Diastopora*, and are homologous with ovi-cells.

Dredged off Guernsey and Jersey, in 1859.

Sedgefield, Dec. 21, 1863.

DESCRIPTION OF THE PLATES.

PLATE IX.

- Fig. 1. *Eudendrium annulatum* (Norman). The hydrozoon of the natural size.
 Fig. 2. The extremity of a branch of the same species, magnified to show the structure of the branches, the polypites, and the gonoblastidia.
 Fig. 3. A portion of one of the larger stems of the same species, showing the curious network of tubes with which they are strengthened.
 Fig. 4. *Tubiclava Cornucopiæ* (Norman). The hydrozoon on a shell of *Astarte sulcata*: of the natural size.
 Fig. 5. A portion of the same, magnified, and showing the structure of the several parts of the species.

PLATE X.

- Fig. 1. *Rhizoxenia albicolor* (Norman), enlarged.
 Fig. 2. *Lepralia venusta* (Norman).
 Fig. 3. A single cell of the same, viewed laterally.
 Fig. 4. *Lepralia complanata* (Norman).
 Fig. 5. *Lepralia laqueata* (Norman).
 Fig. 6. *Lepralia divisa* (Norman).

PLATE XI.

- Fig. 1. *Lepralia polita* (Norman).
 Fig. 2. *Lepralia microstoma* (Norman).
 Fig. 3. *Membranipora sacculata* (Norman).
 Fig. 4. *Diastopora Sarniensis* (Norman): natural size.
 Fig. 5. A portion of the same species, magnified.
 Fig. 6. A few cells and ovi-cells more highly magnified.

BIBLIOGRAPHICAL NOTICE.

Flora of Surrey; or, a Catalogue of the Flowering Plants and Ferns found in the County, with the Localities of the rarer Species. From the Manuscripts of the late J. D. Salmon, F.L.S., and from other Sources. By J. A. BREWER. 12mo. London: John Van Voorst, 1863.

THE preparation and publication of local Floras in England has recently undergone a change. Formerly it was thought sufficient to form a complete list of the plants observed in a county or other

limited district, and to mention the exact localities in which the rarer plants were found : anything beyond this was considered unnecessary. No attempt was then made to determine the frequency of the plants throughout the district, especially that of the more common species, nor was their history usually noticed ; but, in the place of these latter facts, we were often furnished with their generic and specific characters. It is now considered advisable to omit the descriptive part, for so many good general Floras of Britain exist that it has become unnecessary. The omission of the descriptions has allowed the space thus gained to be devoted to a more accurate account of the geographical distribution of the plants, to notices of their first observation in the district, and to other interesting subjects. This new kind of local flora was introduced by the publication of Messrs. Webb and Coleman's 'Flora of Hertfordshire;' and the same plan has been followed in the Floras of Cambridge, Essex, and that of Surrey now before us. The first peculiarity of these books is that the counties to which they relate are divided into districts, and a complete list of the plants, with their localities, is recorded for each of those divisions, by which more complete elaboration of the Flora we obtain information of much value to the botanical geographer. We learn not only that a common plant is found in the county, and perhaps abundant in one part of it, but also that it is, or is not, frequent in each of the districts adopted by the author. For instance, in Surrey, the Wych Elm (*Ulmus montana*) is frequent in two of the nine districts included in the county, it is local in one of them, apparently only planted in another, and absent from the remaining five ; also the Common Elm (*U. suberosa*) is "common throughout the county." When similar Floras of Kent, Suffolk, and Norfolk have been published, our information concerning the distribution of plants in a part of England which is very interesting to botanists (because its proximity to the Continent caused it to be the first British ground reached by what are called Germanic plants, in their migration) will be very complete, and of much use to us in forming an idea of the approximate time of arrival and rate of diffusion of them.

This book contains more than a thousand species ; and when we remember that the county is not at all mountainous nor maritime, this must be considered as a very large number, and a clear proof that the authors have spared no pains in their researches. Indeed the result is in all respects highly creditable to the late Mr. Salmon and also to Mr. Brewer, who is very far from being only the compiler, as he modestly designates himself on the title-page. He has succeeded in obtaining the help of many active observers, and is especially fortunate in receiving that of Mr. H. C. Watson, whose name appears upon nearly every page, and whose localities are recorded in a very complete and instructive manner. Of course it was to be expected that Mr. Watson would add largely to the value of any local flora to which he might condescend to contribute ; for who is not acquainted with his care and accuracy in all matters relating to local botanical geography ?

The larger portion of the volume is occupied by the list of species,

with their localities and such occasional remarks as seemed requisite; and we do not find much that requires our notice, for, of course, extracts are impossible. The author retains (as we think, unadvisedly) the name of *Spergularia*, which was given by Persoon to a section of the genus *Arenaria*, as the generic name of a genus called *Lepigonum* (1818) by Fries previously to the use of *Spergularia* as a generic name by St. Hilaire (1829) or Presl (1819). This is contrary to the laws of botanical nomenclature, according to which a term used as the name of a section has no claim of precedence over another term given to the same section when first recognized as a genus. *Impatiens fulva* seems to be extending itself along the rivers in northern Surrey, and has certainly established its claim to full naturalization in England. *Salix viridis* is a new name, if not a new species, introduced on the authority of the great Swedish salicetist, Dr. N. J. Anderson. We are unacquainted with it, unless, as suggested by Mr. Watson, it is our *S. Russelliana*. *Pinus sylvestris* is establishing itself on the heaths of the county. Is it not probable that this is only a return of one of the aborigines to its ancient habitation? There was a time when the Scotch Fir was widely extended, as a native tree, both in England and Ireland. The restoration of the name of *Hyacinthus non-scriptus* to the *Scilla nutans* of Smith (the *Endymion nutans* of some modern botanists) rather surprises us. Surely it is not really a *Hyacinthus*. *Leesia oryzoides* is stated to occur abundantly by the river Mole. We are not certain that we know what is intended by *Festuca duriuscula*. Smith seems to have given that name to a state of *F. rubra* (Linn.), whereas apparently it really belongs to a plant very closely allied to, if not a variety of, *F. ovina*.

The latter part of the book is occupied by Appendices.

Appendix A. "Plants probably introduced and not thoroughly naturalized;" fourteen in number.

B. "Plants found on the Thames side, near Wandsworth and Battersea, undoubtedly introduced to the locality." This is a long and interesting list. They were mostly observed by Mr. A. Irvine. It seems unlikely that many of them will be able permanently to establish themselves.

C. "Geological Distribution of Plants in Surrey." All the species belonging to the Flora are recited, and their geological position marked in a tabular form.

D. Here the number of species in Surrey is contrasted numerically with that of the whole kingdom, by natural orders. It appears that the plants of this county constitute three-fifths of our whole flora—Dicotyledons three-elevenths, Monocotyledons two-thirds, and Ferns and allies one-half of the total number belonging to those classes respectively.

An alphabetical Index of the orders and genera, and another of the English names, conclude the volume.

We heartily congratulate Mr. Brewer upon the production of so creditable a Flora of his county, and are sure that it will be properly appreciated by botanists out of, and especially in, Surrey.